AMENDMENT
4/28/2004

YOR920000464US1
Serial No. 09/676,423

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 1, lines 5 – 13, with the following amended paragraph.

The present application is related to U.S. Patent Application ~~No. 09/~~ ~~(Attorney~~ No. 09/676,422 (Attorney Docket No. YOR9-2000-0293-US1) entitled "INDEPENDENT NET TASK IDENTIFICATION FOR EFFICIENT PARTITION AND DISTRIBUTION" to Kimelman et al.; U.S. Patent Application ~~No. 09/~~ ~~(Attorney~~ No. 09/676,425 (Attorney Docket No. YOR9-2000-0465-US1) entitled "NET ZEROING FOR EFFICIENT PARTITION AND DISTRIBUTION" to Roth et al.; and U.S. Patent Application ~~No. 09/~~ ~~(Attorney~~ No. 09/676,424 (Attorney Docket No. YOR9-2000-0466-US1) entitled "DOMINANT EDGE IDENTIFICATION FOR EFFICIENT PARTITION AND DISTRIBUTION" to Wegman et al. all filed coincident herewith and assigned to the assignee of the present invention.

Please replace the paragraph on page 9, line 23 – page 10, line 13, with the following new paragraph.

Figure 3 is a flow diagram 160 of the optimization steps for determining an optimum distribution of program components to individual participating computers according to a preferred embodiment of the present invention. First, in step 162, an initial communication graph is generated for the program. Then, in step 164 machine nodes are added to the communication graph. As noted above, certain types of components are designated, naturally, for specific host machine types, e.g., graphics components are designated for clients with graphics capability or, server components designated for a data base server. After assigning these host specific components, in step 168 independent nets are identified and the communication graph is partitioned into the identified independent nets as described in U.S. Patent Application ~~No. 09/~~

~~(Attorney~~ No. 09/676,422 (Attorney Docket No. YOR9-2000-0293-US1) entitled "INDEPENDENT NET TASK IDENTIFICATION FOR EFFICIENT PARTITION AND DISTRIBUTION" to Kimelman et al. assigned to the assignee of the present invention and incorporated herein by reference. In step 170 the Machine Cut reduction method described hereinbelow is used to reduce the independent nets and then, in step 172 a min cut for the reduced independent nets, the min cuts for all of the independent nets being the min cut for the whole communication graph.

Please replace the paragraph on page 12, line 14 – page 13, line 5, with the following new paragraph.

In the preferred embodiment, the min cut step 170 is an iterative process, wherein independent nets are reduced using the Machine Cut steps described herein and, when necessary, in combination with other linear complexity methods such as the Dominant Edge identification method of U.S. Patent Application ~~No. 09/_____ (Attorney~~ No. 09/676,424 (Attorney Docket No. YOR9-2000-0466-US1) entitled "DOMINANT EDGE IDENTIFICATION FOR EFFICIENT PARTITION AND DISTRIBUTION" to Wegman et al. and the Net Zeroing method of U.S. Patent Application ~~No. 09/_____~~ ~~(Attorney~~ No. 09/676,425 (Attorney Docket No. YOR9-2000-0465-US1) entitled "NET ZEROING FOR EFFICIENT PARTITION AND DISTRIBUTION" to Roth et al., all filed coincident herewith, assigned to the assignee of the present invention and incorporated herein by reference. Further, as independent nets are reduced, those reduced nets are further checked as in step 168 above to determine if they may be divided into simpler independent nets. Then, the Machine Cut method of the preferred embodiment is applied to those simpler independent nets. To reach a solution more quickly, on each subsequent pass, only nodes and edges of a subgraph that were adjacent to areas reduced previously are rechecked. Thus, the communication graph is simplified by eliminating machine cut edges to reach a min cut solution much quicker and much more efficiently than with prior art methods.